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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/914,458	02/11/2002	Oskar Wack	99/07049 W0US	5328

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EXAMINER
WEBB, GREGORY E

ART UNIT	PAPER NUMBER
1751	

DATE MAILED: 05/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/914,458	WACK, OSKAR	
	Examiner	Art Unit	
	Gregory E. Webb	1751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 February 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *12-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *12-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 12-14, 16-20, and 24 are rejected under 35 U.S.C. 102(b) as being antipated by Kuemin et al (WO 96/28535).

Kuemin teaches azeotropic composition containing 20-99.99% of a partially soluble solvent and 0.01-80% water. The purpose of these compositions is for wet cleaning of articles (see abstract).

In table III (see page 13) Kuemin teaches an azeotropic cleaning composition containing 17.7% DPnP and 82.3% water.

In examples 1 and 2 (see pages 19 and 20) Kuemin teaches a method of cleaning using the azeotropic composition. Kuemin teaches the steps of contacting the substrate with the composition. Kuemin teaches in example 2 an operating temperature of 40°C.

Kuemin teaches the thermodynamic state as being on the border of a true solution and an emulsion (see page 3, lines1-15) and would thus meet the applicant's functional description of the cleaning composition found in instant claim 1.

Although the prior art does not directly discuss the "miscibility gap," such limitation would be inherently met by the prior art as a "miscibility gap" would be an inherently property of the emulsion described by Kuemin as the prior art meets all the structural limitations of the

claimed composition. Emulsion inherently form a "miscibility gap" between the aqueous phase and the solvent phase. The term normally used in this instance is "interface." Such interfaces typically form when the solvent saturation exceeds the solubility of the solvent.

Concerning claim 24, Kuemin teaches the addition of optional ingredients including corrosion inhibitors which would broadly meet the applicant's limitation to a secondary solvent (see page 15, lines 13-18). In particular, Kuemin teaches the use of trialkanolamine and benzotriazole. Alternatively, the secondary solvent is taught by Kuemin to be a hydrocarbon such as undecane (see page 10, lines 25-30).

Claims 12-15, 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Shiino et al (US 5,574,002).

Shiino teaches in example 1 a composition containing 100g water, 100g propylene glycol n-butyl ether, and an alcohol. Shiino discusses the thermodynamic state of the composition as well as the effects of the addition of water to the composition (see col. 3, lines 50-60). Shiino teaches the addition of water in excess will results in a phase separation. This phase separation thus meets the applicant's description of a "miscibility gap."

Shiino further teaches the use of these solution for cleaning substrate using ultrasonic agitation (see col. 5, lines 45-68).

Concerning the weight percentages, Shiino teaches various combinations of the water, ether and alcohol (see cols. 2-3). However, the following upper limit range meets the applicant's claimed percentages: 100g ether, 200g alcohol, and 200g water yields 25% ether as the minimum amount.

Claims 12-14, 16-23 are rejected under 35 U.S.C. 102(b) as being anticipated by VanEenam (US 5,080,831).

VanEenam teaches composition containing 2-10% of a sparingly water soluble organic solvent (see cols. 1-2). VanEenam teaches suitable solvents including propylene glycol monomethyl ether acetate (see col. 4, lines 54-66).

VanEenam teaches the cloud point of the composition to be in excess of 50°C (see cols. 7-8). The cloud point of the composition and the limited stability of these compositions meets the applicant's limitation to a composition forming a "miscibility gap" at a "temperature that prevails."

In example 21, VanEenam describes a composition containing propylene glycol monomethyl ether acetate, surfactants, citric acid and water.

Claims 12, 13, 15-17, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Dishart et al (US 5,096,501).

Dishart teaches the following:

> "In the present invention a key aspect is the employment of a specially formulated cleaning composition which is insoluble or substantially insoluble in water so that phase separation readily occurs. In a first step of the present process a cleaning composition is applied to a substrate surface. The manner of application of the cleaning composition is not critical and can involve, e.g., dipping of the substrate into the cleaning composition or spraying of the composition. In a dipping operation some agitation of the cleaning bath is generally desirable such as by submerged liquid jets, mechanical stirring or ultrasonic application.
>
> (6) After the first step in which the cleaning composition is applied to a substrate surface a second step of a water rinse is employed. Thereafter in a third step, a mixture of the cleaning composition, removed contaminant and rinse water are collected in a container. The mixture is allowed to stand wherein phase separation of the cleaning composition and rinse water takes place. Preferably for safety considerations the hydrocarbon fraction will be in droplets suspended in water as the continuous phase rather than water suspended in a hydrocarbon. Time for phase separation is preferably almost immediately such as within one minute. However separating times can be longer

> such as up to one or three hours with a disadvantage of less throughput. Use of elevated temperature may increase the rate of separation. It is understood that it is within the scope of the invention to employ water with the cleaning composition in the first step in which the cleaning composition is applied to the substrate surface prior to a rinsing step.
>
> (7) The surface contaminant particularly if it is hydrocarbon based will concentrate and collect in the cleaning composition. To avoid buildup of contaminants to unacceptable levels a portion of the cleaning composition should be removed and environmentally disposed, e.g., by burning. In steady state operation of a cleaning process a portion of the cleaning composition can be recycled for use with other substrates. However, it is not necessary for the cleaning composition to be recycled but for economic reasons such recycling is preferred. " (see cols. 2-3)

Dishart teaches in example 3 a composition containing surfactants, 5% partially soluble esters, and sparingly soluble hydrocarbon. This composition was added to water to form an unstable emulsion to be used in a manner described above.

Conclusion

No claims have been found to be allowable. Also of note with regard to the state of the art in aqueous solvent cleaning are the following references: Blatter et al (US 5,753,605), Hayes et al (US 5,705,472), and Johnson (US 4,592,787).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory E. Webb whose telephone number is 703-305-4945. The examiner can normally be reached on 9:00-17:30 (m-f).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on 703-308-4708. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9310 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

Gregory E. Webb
Primary Examiner
Art Unit 1751

gw
May 13, 2003